

**WASTEWATER TREATMENT PLANT EXPANSION AND UPGRADE  
FOR HEBER, CALIFORNIA**

**ENVIRONMENTAL ASSESSMENT**

**Prepared by:**

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## **PURPOSE AND NEED**

The environmental assessment (EA) presented herein complies with Council of Environmental Quality (CEQ) (40 CFR Parts 1500-1508) and U.S. Environmental Protection Agency (EPA) regulations (40 CFR part 6). This EA documents the potential environmental consequences generated from the implementation of the proposed project and supports the attached Finding of No Significant Impact (FNSI) which is circulated for public review. All public and interested agencies are encouraged to submit comments. EPA will not take any administrative action on the project during the 30-day review period (February 1, 1999 through March 2, 1999). Once received, EPA will consider all comments submitted on the FNSI and EA before taking administrative action.

The City of Heber has been served with a Declaration of Pollution Problem and Time Schedule for Compliance by the Imperial County Public Health Department as well as a notice by the California Regional Water Quality Control Board, Colorado River Basin Region that the plant's average daily flow consistently exceeded the design capacity. The purpose of the proposed action, to expand and upgrade Heber's wastewater treatment plant, is to comply with the mandate issued by State and County agencies.

## **PROJECT LOCATION AND DESCRIPTION**

The unincorporated area of Heber, California is located in the Imperial County approximately 5 miles north of the United States/Mexico border on State Route 86 between El Centro to the north and Calexico to the South. The Heber urban area is bounded by Farnsworth Lane on the west, Corell Road on the north, Pitzer Road on the east, and Fawcett Lane on the west (see attached maps at end of document). Currently, Heber's Public Utility District (PUD) is responsible for the collection, treatment, and disposal of wastewater, as well as the supply of drinking water in Heber. The service area spans 800 acres and serves a population of approximately 3,200 inhabitants.

The area of Heber, characterized by flat terrain, is one of the most seismically active zones of California. Thus, fault rupture is a possibility anywhere in Imperial County. The closest major active faults are the Superstition Mountain fault, located approximately three miles to the northeast, and the Imperial fault, located six miles to the northeast. The great San Andreas fault is located approximately 30 miles to the northeast.

The climate of the area is desert, characterized by low precipitation, hot summers, mild winters, low humidities and strong inversions. The hottest weather occurs during the month of July, with an average maximum temperature of 113.8°F, an average minimum temperature of 30.6°F, and an average mean temperature of 91.5°F. The coldest months correspond to December and January with an average maximum temperature of 79.5°F, an average minimum temperature of 30.6°F, and an average mean temperature of 54.7°F. The annual average rainfall is 2.89 inches. The Imperial Valley is located in the Salton Sea Air Basin and it is under the jurisdiction of the South Coast Air Quality Management District. The primary air quality concern in Heber and in the County of Imperial is particulate matter originating from agricultural activities. Currently, Imperial County is considered as 'unclassifiable/attainable' for carbon monoxide and 'transitional' to nonattainable for ozone.

Seventy percent of the Heber community is residential, while the remaining thirty percent is commercial. The main economic activity of the area is agriculture. There is no heavy industry in the area. The housing type is mostly single-family residential, a small portion of the housing units are multi-family. In Imperial County the housing mix is comprised of 60 percent single-family units, 20 percent multi-family units, and 20 percent mobile homes. According to the U.S. Bureau of the Census, in 1990, the population for Heber was 2,566.

## **VEGETATION**

The Imperial Valley area is characterized by species tolerant to salt: saltbush (*Atriplex canescens*), iodine bush (*Allenrolfea occidentalis*), tamarisk (*Tamarix* sp.), mesquite (*Prosopis juliflora*), arrow weed (*Plucea sericea*), and sea blight (*Suaeda* sp.), and other halophytes. However, a great portion of the native plant life has been cleared from the valley floor for farming purposes. According to U.S. Fish and Wildlife service, there are no endangered or threatened plant species in the Heber area.

## **WILDLIFE**

According to U.S. Fish and Wildlife, the burrowing owl, a species of special concern, is found in the Heber PUD service area. Surveys indicate that a burrow for the owl is located on the Heber wastewater treatment plant site. As regulations prohibit taking individual birds or occupied nests, appropriate mitigation measures will be undertaken (see Primary Impacts section). There are no endangered or threatened species nor critical habitats in the service area, facilities or disposal sites. There are no wetlands on the disposal/irrigation sites nor service area.

## **WATER RESOURCES, FLOOD PLAINS AND WETLANDS**

There are two important rivers near the project area, the New River and the Alamo River. These two rivers flow north and discharge to the Salton Sea. Neither of these two rivers is designated wild nor scenic.

The Heber area is comprised mainly of agricultural and residential areas. There are no associated wetlands within the Heber project area or environmentally significant farmlands in the area.

There are no groundwater sources for potable water for the Heber area. Potable water for the Heber area is supplied from the All-American canal and then treated in the PUD's water treatment plant.

The Townsite of Heber is not located in a flood hazard area. The Federal Emergency Management Agency Flood Insurance Rate map shows Heber as located in designated zone "C", defined as an area of minimal flooding and outside designated flood hazard zones.

## **CULTURAL RESOURCES**

There are no significant impacts to prehistoric cultural resources expected in the project area, since most future development activities will occur in existing farmland and residential areas. The Heber area is considered in a "zero to rare" sensitivity zone. In addition, there are no designated State or National Historical Landmarks within the Heber area and no archaeological or historical

resources were identified, with the possible exception of the railroad tracks which are over 45 years old. The railroad tracks, however, are located outside the area of potential effect.

### **WATER QUALITY ISSUES**

In March of 1997, the California Regional Water Quality Control Board, Colorado River Basin Region ("the Regional Board") notified the Heber PUD that the plant's average daily flow consistently exceeded the design capacity and appeared to be in disrepair. According to the Regional Board's findings, the skimmers on the clarifiers were inoperable, there were scum problems in the clarifiers, and the concrete sludge drying beds were ineffective. Also, the County Public Health Department declared a pollution problem on December 23, 1997. On January 8, 1998, the Regional Board passed Resolution No. 98-011, which approved and accepted the County of Imperial health Officer's Declaration of Pollution Problem and Time Schedule for Compliance for the Heber PUD, which mandates the expansion and upgrade of the plant.

### **EXISTING FACILITIES**

The existing wastewater treatment facilities provide preliminary treatment (screening and comminution), secondary treatment through an oxidation ditch, and secondary clarification. The treatment plant is designed to treat 405,000 gallons per day, however it only treats 402,000 gallons per day in compliance with NPDES permit (No. 95-405). In 1997, the average daily flows were 431,000 gpd, 107 percent of the plant's permitted capacity. The peak month flow, corresponding to July of 1997, was 519,000 gpd. The day with the highest flow was September 26, 1997 with 630,000 gpd. The day with the lowest flow was December 29 with 63,000 gpd. The influent to the plant is considered typical for municipal wastewater treatment facilities with an average 5-day BOD of 178 mg/L and a range from 118 to 223 mg/L. The 24-hour composite samples for total suspended solids (TSS) averaged 137 mg/L and ranged from 97 to 182 mg/L. The treatment plant currently uses six sludge drying beds with a total area of 2,688 ft<sup>2</sup>. The solids are sent to a private landfill. The treated effluent is discharged via a buried 8-inch and 12-inch diameter pipeline to the Imperial Irrigation District Central Drain 3-D No. 1, which eventually discharges to the Alamo River and Salton Sea.

The plant met effluent quality requirements at all times during 1997. The plant met effluent quality requirements of 30 mg/L 30-day arithmetic mean BOD at all times except for one weekly 24-hour composite sample, but still met the 7-day arithmetic mean requirement of 45 mg/L. The plant had settleable matter below 0.1 mg/L, below the 0.3 mg/L 30-day arithmetic mean limit. Also, the pH averaged 7.5, complying with the 6 - 9 allowable range. Total dissolved solids averaged 990 mg/L, below the permit limit of 4,000 mg/L. The annual December 1997 analysis of effluent for organics for EPA 624, EPA 625, and EPA 8080 listed constituents were all non-detectable.

### **PROPOSED PROJECT**

The proposed project will expand the plant capacity to 810,000 gpd average dry weather flow (ADWF), an increase of 405,000 gpd over current capacity. This design capacity is based on 1998 Southern California Association of Governments (SCAG) projections (disaggregated from 47.8 percent of Census Tract 113) for the year 2010 and a wastewater generation of 130 gallons per person per day. The proposed project contemplates the expansion of the wastewater treatment facilities to treat flows until the year 2010, after which another expansion of the facilities will be

required. Currently, the Heber PUD serves a total of 3,318 people and it is projected that by the year 2010, the PUD will serve 6,414 people. The expansion of the treatment plant considers the addition of a new oxidation ditch, two clarifiers, a return activated sludge and waste activated sludge pump station, sludge drying beds, and disinfection facilities. Sludge will be dewatered and dried using open sludge drying beds. The dried sludge will be hauled to a private landfill. The treated effluent will be discharged from the ultraviolet disinfection facilities to the Central Drain 3-D No. 1 via an 18-inch PVC line.

## **PROJECT ALTERNATIVES**

There are several alternatives analyzed for the expansion of the Heber PUD wastewater treatment plant:

I) No action. The no-action alternative maintains current processes at current operational levels. No processes would be modified, rehabilitated or constructed. Since there is a mandate by pertinent State and county responsible agencies to improve the wastewater treatment conditions in Heber, the no-action alternative is not an option and was rejected as an alternative.

II) Overload the existing wastewater treatment plant. This alternative is similar to the no-action alternative and it contemplates overloading the treatment plant capacity for a short period of time. Overloading the plant will exceed discharge requirements and it would place Heber PUD in violation of its NPDES permit.

III) Locate additional facilities on a new plant site. This alternative considers the construction of new facilities, in addition to the existing ones, in a different site than the existing plant. Locating the treatment plant in a new site requires the construction of the following unit processes: headworks, influent pump station, oxidation ditch, clarifiers, return activated sludge (RAS) and waste activated sludge (WAS) pump station, sludge dewatering, and disinfection. Also, a new operation and administrative building would have to be constructed. This alternative was rejected on the basis that it presents a greater potential for environmental impacts as compared to the alternative that contemplates the expansion of the treatment plant at its existing site. The construction of a new wastewater treatment plant could potentially impact biological resources in the new location. Also, this alternative involves impacts on new parcels of land and the creation of a second point of discharge.

IV) Expansion of the treatment plant in the same site as current facilities. The expansion of the treatment plant to a capacity of 810,000 gallons per day considers rehabilitation, upgrade or construction of the following unit processes: headworks, influent pump station, oxidation ditch, clarifiers, RAS/WAS pump station, sludge dewatering, and disinfection facilities. The disinfection alternatives considered were chlorination, and ultraviolet disinfection. The selected alternative consists of the addition of the processes aforementioned, as well as the use of a chlorination facility for disinfection.

## PRIMARY IMPACTS

Table I lists the areas of impact as a result of project construction or operation.

Table I. Areas impacted directly as a result of project construction or operation

Area of Impact	IMPACTED		MITIGATED	
	YES	NO	YES	NO
Wetlands		X		
Ground water		X		
Flood plain		X		
Environmentally significant agricultural land		X		
Coastal zone		X		
Important vegetation types		X		
Threatened or endangered species		X		
Species of Concern	X		X	
Critical habitats		X		
Environmental sensitive areas (including surface waters)		X		
Open space recreation		X		
Wild and scenic rivers		X		
Other (geological stability, air quality, etc.)				
Specify: geological stability (seismicity)	X		X	

While not endangered or threatened, the **burrowing owl** is a state and federal species of concern and it is considered protected under the Migratory Bird Treaty Act of 1918 and by the Fish and Game Codes protecting native species. These regulations prohibit taking individual birds or occupied nests. There are reports of one pair of burrowing owls near the on site manholes and an active nest at the toe of the southeast berm of the existing southern pond. This pond and a portion of the existing pond will be the site of the new oxidation ditch. The manholes where the birds perch will not be affected. Mitigation measures to protect the burrowing owl, as suggested by the U.S. Fish and Wildlife Service, include: a cessation of construction between February and August, the owl's nesting season; owls will be excluded from the active burrow after the young have fledged by installing one-way door traps on the burrow and then filling the site once all owls are excluded, or trapping the owls; and, providing an alternate site for the owls to relocate after they have been excluded from their natural burrow site.

There may be potential impacts associated with seismic activities once the facilities are completed. As described earlier, the Valley of Imperial has great seismic activity, and strong shaking could damage the treatment plant facilities. If the facilities were to be damaged by seismic activity, no untreated effluent would leave the facilities or the plant site since the facilities are at or below grade and the site is flat. The following measures have been incorporated to the project planning to mitigate the possible impact caused by seismic activity: the treatment plant will be designed to withstand earthquakes as defined in the Uniform Building Code, and all geotechnical studies will be submitted to the Imperial County Planning and Public Works Departments for review and approval.

Another potential impact, unless mitigation is incorporated, is the use of hazardous chemicals during the disinfection process. The expanded plant will disinfect using chlorine gas (chlorination), a known toxic substance. Dechlorination will be achieved via sulfure dioxide, a toxic substance in large quantities. Since there is a potential for a public health hazard due to the risk of release to the environment of the toxic substances, the following mitigation measures have been incorporated into the planning process: follow the Chlorine Institute procedures for safe handling, transport, storage and use of gaseous chlorine; the plant operations staff will be trained in the storage and use of chlorine; appropriate chemical storage and use facilities and alarms will be specified and installed at the plant; chlorine and sulfur dioxide will be used in accordance with requirements of the Fire Department; including a Risk Management Prevention Plan if required by the Fire Marshal.

In addition to the possible impacts caused by seismic activity and the impacts to the burrowing owl, the construction activities will have less than significant impacts or no impacts at all. There would be no anticipated direct effect on agricultural resources caused by plant facilities construction or operation within the existing site boundaries. Project construction will have no impact on the physical arrangement of the community, as all facilities would be on the existing site. Construction activities will not change the site topography, thus no erosion or unstable soil conditions from excavation are expected. Per the South Coastal Air Quality Management District Handbook, the project would have no significant impacts on air quality. The construction activities will not alter air movement, moisture, or temperature, or cause any change in climate. Construction activities will temporarily increase vehicle trips for the duration of the activities on Main Street in Heber, and on Rockwood Avenue; however, the effect is less than significant. The construction activities will also affect parking, for parking space on the site is limited. However, parking is available on Rockwood Avenue, an industrial area with few vehicles in the streets. During construction, additional construction equipment on the roads may increase potential hazards for pedestrians or cyclists on access roads. Access of emergency vehicles to the project site will remain adequate. These traffic related impacts are not considered to be significant. There will be no impact on rail traffic or railroad bed conditions or alternate means of transportation. During construction, noise levels at the plant will increase to 90 dB at 50 ft for short periods, since the nearest sensitive receptor (in the form of residences) is located 2,600 ft away and a 90dB at 50ft is equivalent to 56 dB at 2,600 ft, the noise levels for sensitive receptors are below the 75 dB threshold for significant construction noise. However, to further minimize noise impacts on residences, construction will be limited to 7 a.m. to 7 p.m. Monday through Friday, and 9 a.m. to 5 p.m. on Saturday. Ear protection will be provided for construction workers as needed.

Operation of the treatment facilities, with the exception of transportation, storage and handling of hazardous chemicals used for chlorination and dechlorination in the disinfection facilities, present impacts that are less than significant or non-existent. The operation of the new facilities will increase the discharge into the Central Drain 3-D No. 1 by 405,000 gpd. The quality of the discharge will be the same as present with the addition of disinfection. The effect of the proposed additional effluent flow on the amount of surface water is less than significant, only increasing the average low water depth of the Central Drain from three to six inches. The effluent would increase the inflow to the Salton Sea by 4 hundredths of one percent. The additional effluent will not change any currents in the agricultural drain, or change the course or direction of the water movements. The operation of the expanded treatment plant will reduce odor problems. The operation of the new facilities will incorporate energy conservation efforts, minimizing conflict with energy conservation plans. Similarly, the energy consumed in plant construction and operation will represent the minimum required to accomplish their identified purpose. The project will not affect the availability of any mineral resources. The project creates no fire hazard since plant maintenance does not allow the development of flammable vegetation. There would be no noise impact in the operation of the treatment plant. There would be no impact on the provision of public services caused by the operation of the treatment plant. The consumption of energy in the plant would increase. Although this amount of energy is not mitigable, it is not significant and will require no significant system alterations for the power provider. Additional communication systems will be required for the chlorine system monitoring, the impact would be less than significant. Solid waste disposal will be sent to a private landfill, the expansion of the facilities will not appreciably impact the remaining capacity of the landfill.

A qualified cultural resources specialist has determined that there are no cultural or historical features located in the direct impact zone. The State Historic Preservation Officer has concurred that there will be no effects on properties included in or eligible for inclusion in the national Register of Historical Places as a result of this project. Should previously unidentified cultural resources be discovered during the construction, all activity in the immediate vicinity of the find will cease. The National Register eligibility of the find will be determined by appropriately qualified experts in consultation with the State Historic Preservation Officer. If the find is eligible for inclusion in the National Register, the Secretary of the Interior will be notified as specified in 36 CFR §800.7, Advisory Council on Historic Preservation, Regulations for the Protection of Historic and Cultural Properties.

The project would have benefits on the water quality of the area by providing adequate treatment that meets Federal, State and Local regulations. Also, increasing the flows discharged to the Central Drain 3-D No. 1 has the positive effect of providing a small volume of freshwater replenishment to the Salton Sea and wetland/aquatic habitat in the Drain and the Alamo River.

## **SECONDARY IMPACTS**

According to the Southern California Association of Governments, the population projected in Heber for the year 2000 is 3,641; 6,414 for the year 2010 (the “planning period”); and, 9,886 for the year 2020. This growth in population, coupled with the expansion of both the water and wastewater systems is likely to create secondary impacts in the area. Table II present the areas



impacted as a result of population growth accommodated by the proposed project.

Table II. Areas impacted as a result of population growth.

				Mitigated	
Area of Impact	Impact Clearly Defined	Impact Uncertain	No Impact	Yes	No
Air quality		X			
Environmentally significant agricultural lands			X		
Transportation		X			
Housing		X			
Business activity		X			
Open-space recreation			X		
Infrastructure (water supply, schools, etc.)		X			
Wetlands			X		
Flood plain			X		
Ground water			X		
Surface waters			X		
Coastal zone			X		
Threatened or endangered species			X		
Critical habitats			X		
Environmentally sensitive areas			X		
Wild and scenic rivers			X		
Important vegetation types			X		
Other (geologic stability, cultural resources, etc)			X		

The growth of Heber is likely to cause the expansion of the infrastructure needed to provide public services to citizens. An increase in population entails an increase in roads caused by new developments, schools, police protection, fire protection, commercial units, and housing. Secondary impacts to these activities include the increase in traffic, possibly causing negative

impacts to air quality in the area. The increase in transportation, housing, business activity and other infrastructure is consistent with the County's Development Goals for Heber, outlined in the County General Plan and Heber Urban Area Plan.

There would be no impact on environmentally significant agricultural lands since there are none in the area. There would be no impact on open-space recreation. There would be no impacts on wetlands, flood plains, or groundwater. There would be no impact on threatened or endangered species, critical habitats, environmental sensitive areas or wild and scenic rivers since there are none in the area.

### **CUMULATIVE IMPACTS**

Currently, there is an effort in Heber to improve the water supply system. The present system is old and deteriorated. There are three alternatives being considered at the moment for the rehabilitation of the system: rehabilitate the water system, establish a connection to the City of El Centro to purchase water, and establish a connection to the City of Calexico to purchase water. At present the merits of each alternative is being considered.

The expansion of the water system might present some impacts as well. However, the impact of these alternatives is minimal since there would be minor construction in Heber if the third alternative is selected. Similarly, if alternatives one and two are selected, the water lines connecting the nearby cities would be placed in the right of way of roads, minimizing construction impacts.

### **OTHER IMPACTS**

The only irreversible and irretrievable commitment of resources comes in the form of electricity, a needed resource for the operation of the treatment plant. Other resources include the chemicals used in the chlorination and dechlorination processes, namely gaseous chlorine and sulfur dioxide, as well as the materials used for construction of the facilities. The scale of the project is small that it would not cause any impacts on the availability or mining of these materials.

### **PUBLIC PARTICIPATION**

The first public meeting was held on January 12, 1999 in the Heber Elementary School. Approximately 35 residents attended the meeting. The main comments focused on the financial aspects of the project. Several residents asked about the sources of funding for the projects and how the monthly increases in user fees were being used. The second public meeting is scheduled for January 28, 1999.

## **SOURCES CONSULTED**

The following is a list of the sources consulted for the preparation of this Environmental Assessment:

- (1) *Mitigated Negative Declaration for Wastewater Treatment Plant Expansion and Upgrade, Heber, California.* Prepared for Heber Public Utility District by Montgomery Watson.
- (2) *Facilities Planning Document for the Heber Public Utility.* Prepared by Dudek & Associates.
- (3) *Revised Draft Environmental Impact Report (EIR) for the County's General Plan Update.*
- (4) *Heber Urban Area Plan*